original capital, or on capital stock more or less arbitrarily issued, and no obvious figure would show the rate of yield upon what they considered the investment entitled to return. I suspect that many public service companies would be greatly surprised and delighted if rates were revised to yield a " normal return " on the undepreciated outlays on their plant and improvements.

In short, on the question of justice which I now understand him to regard as central, I regard Professor Young's reasoning as still inconclusive, and his recommendation based on that reasoning as still unacceptable.

JOSEPH S. DAVIS.

CONCLUDING COMMENTS

I am sorry to prolong this controversy, but Mr. Davis's rejoinder brings the difference in our views so nearly to a point that I must attempt to complete that task. He still maintains (1) that the existence of a reserve for accrued depreciation has no bearing upon ability of a company to make replacements, and (2) that the market value of a plant is what should be sought in valuation for purposes of rate control.

1. To Mr. Davis the depreciation reserve is merely a record of fact and has no other function, while I am pragmatist enough to insist that the definition of fact must itself hinge upon some specific function or purpose of the reserve. But there is a particular fact of which Mr. Davis would make the depreciation reserve a record, and that is the diminution of the market value of capital assets which results from the shrinkage of their aggregate expectation of life. Mr. Davis would not, I suppose, question the fact that charges for the depreciation of fixed capital were first introduced into

operating costs quite as much to assure provision for future needs as to record the diminution of capital values. Nor do I suppose that he would question the statement that for a long time there was a mistaken notion that in practice these two principles of depreciation came to about the same thing. At any rate, I do not find in standard accounting literature any clear recognition of the fact that the amount of depreciation to be charged on large and varied properties is more or less according as one principle or the other is adopted. And the mistake in question was made by the accounting authorities of the Interstate Commerce Commission in 1907.

The theory of the meaning of the depreciation reserve which Mr. Davis holds is not without support, but it cannot be said to command the unanimous approval of accountants. I do not, however, wish now to question its general appropriateness, and have already said that I see no conclusive reason why public authorities should not compel public service companies to accumulate a reserve against depreciation in market value. But I do object to the assumption that the companies should in every case have accumulated that particular kind of a reserve before the days of regulation.

This does not mean, however, that outside of the group of enterprises where annual replacements can easily be made from annual earnings the existence of such a reserve does not affect ability to make replacements. Mr. Davis holds that the reserve has no such bearing, but it is difficult to believe that he is seriously urging considerations which he thinks of practical consequence. Surely his statement that "the keeping of such a reserve does not hold in the business assets which might otherwise be distributed to stockholders" is quite out of line with the generally candid nature of his

able argument. Wiping out the reserve would increase stated profits by an equivalent amount and this would permit corresponding dividends. That the assets thus released might not be in a form for immediate distribution or conversion is a matter of no significance.

The matter of provision for replacements is entirely similar. So far as any bearing upon the general problem under discussion is concerned, it matters not a whit whether that part of gross earnings which the inclusion of depreciation charges in operating expenses makes unavailable for distribution to stockholders is used in building up a segregated body of quick assets or is put into general additions and betterments. In both cases the general result is that as compared with liabilities (other than the depreciation reserve) resources are larger than they otherwise would have been. In each case retirements can be made without affecting stated profits, and assets, equal in amount to those purchased with earnings set aside on account of depreciation, can be converted for replacements. If these additional assets are not in easily convertible form, extraordinarily large replacements might even necessitate borrowings; but the net effect on the balance sheet would be unchanged. By " ability to make replacements " Mr. Davis merely means the convenience and (within narrow limits) the economy with which replacement needs may be met. But the important thing to a company is the ability to retire old properties and replace them with new without affecting its degree of solvency as shown on the balance sheet. For this purpose it is immaterial whether the property set aside for replacement purposes is segregated or is scattered among the general assets.[1] In this sense every depreciation reserve

[1] " The only question as to the wisdom of this [latter] policy is the question of the availability of the fund, that is, whether in case of need the property could be quickly converted into cash so as to be put to its intended use." — W. M. Cole, Accounts; their Construction and Interpretation, p. 89.

is a replacement reserve, and so far as such a reserve represents a permanent accumulation, it is perfectly accurate to say that it is to that extent "useless for replacement purposes."

2. In setting up the market value of the plant (not of the business) as the amount on which a fair return is to be conceded, Mr. Davis frankly accepts the logical consequence of his emphasis on the correlation between physical depreciation and what he prefers to call "productive power." Moreover, he frankly rejects the currently received principles of valuation, and it may be that I should be right in assuming that he assents to my principal thesis, which is that deductions for depreciation in public service valuations are at variance with the general principles on which such valuations now seem to be based.

I cannot now enter into a discussion of the general validity of the market value standard or of the difference its adoption would make in practice. But I must enter an objection to Mr. Davis's identification of market value and investment. One is a matter of current imputation, the other is a matter of the interpretation of historical fact. I should define investment as the aggregate money sum expended in creating or acquiring income-yielding goods or rights, minus whatever part of it may be properly said to have been paid back out of earnings.[1] The investment in a piece of idle real estate is merely the purchase price plus carrying charges; it is that, whether its market value has doubled or diminished since its acquisition. The difficulty in measuring the investment in public service plants

[1] Secondary and derivative meanings of the word are (1) the goods or securities in which the money is invested and (2) the present market value of such goods or securities. Not all the investment in a public service plant may be entitled to a return. The investment entitled to a return must have been appropriate and (within reasonable limits) necessary.

comes from the practical impossibility of drawing a line between return on the investment and return of the investment. I do not think there is so definite a line of demarcation as Mr. Davis holds, except for investments that have been terminated by the distribution of the assets.

For going concerns even modern accounting does not really attempt accurately to define annual profits. Note, for example, the difference in its treatment of unrealized depreciation and unrealized appreciation. Again I submit that where realized depreciation is normally and easily met out of operating expenses and where, with the sanction of law and custom, unrealized depreciation in market value has not been charged to operating expenses, it is by no means a demonstrable fact that this unrealized depreciation has nevertheless been a virtual operating expense. Business policies were not framed with reference to the marketability of capital assets, and were quite properly not so framed.

From Mr. Davis's discussion of the probable actual earnings of public service undertakings in the past I infer that the difference in our views is in large part not so much a matter of logic as of our very different impressions of the degree of success which has attended the average undertaking. I impute no high degree of accuracy to the statistics in the Commissioner of Labor's Report. But I am inclined to give more weight than Mr. Davis does to the explanation offered by the editor of the tables (presumably Mr. G. W. W. Hanger) who must be supposed to have been conversant with the various limitations of the figures. Mr. Davis's alternative explanation may have significance for a few isolated cases, but I do not think that the practice of making improvements out of earnings without charging them to the property account has been so common

among local public service companies as he supposes. It is easy to let one's impression of the general profitableness of such undertakings be derived from a few conspicuously successful examples. Looking at the general run of the cases in the reports of state commissions, one's impression of the facts is not far out of line with that given by the Commissioner of Labor's report. The theory of monopoly price has no bearing upon the matter, for that theory assumes the most important variable — the amount of the investment in fixed capital — as a given quantum.

No rules of rate regulation can be applied without making some exceptions. There are cases where the rigid application of any general principles would have to be somewhat tempered, just as there are cases where obvious extortion in the past might properly be taken into account. But for the most part principles for the valuation of properties which were installed under conditions of risk taking, and sometimes of potential destructive competition, must be general in their application. We can neither penalize past success nor make compensation for past failure. Our rules must be shaped with reference to the normal or most numerous cases. I suspect that it is possible that Mr. Davis might agree with me in upholding Mr. Allison's contention if he shared my view as to the degree in which the absence of depreciation charges has tended to increase the ratio of investment to gross earnings in the case of the average public service company.

Allyn A. Young.